J. A. HOWARD, Sr.

WINDOW CLEANER.

APPLICATION FILED JUNE 5, 1920.

1,357,869. Patented Nov. 2, 1920.

Fig. 1.

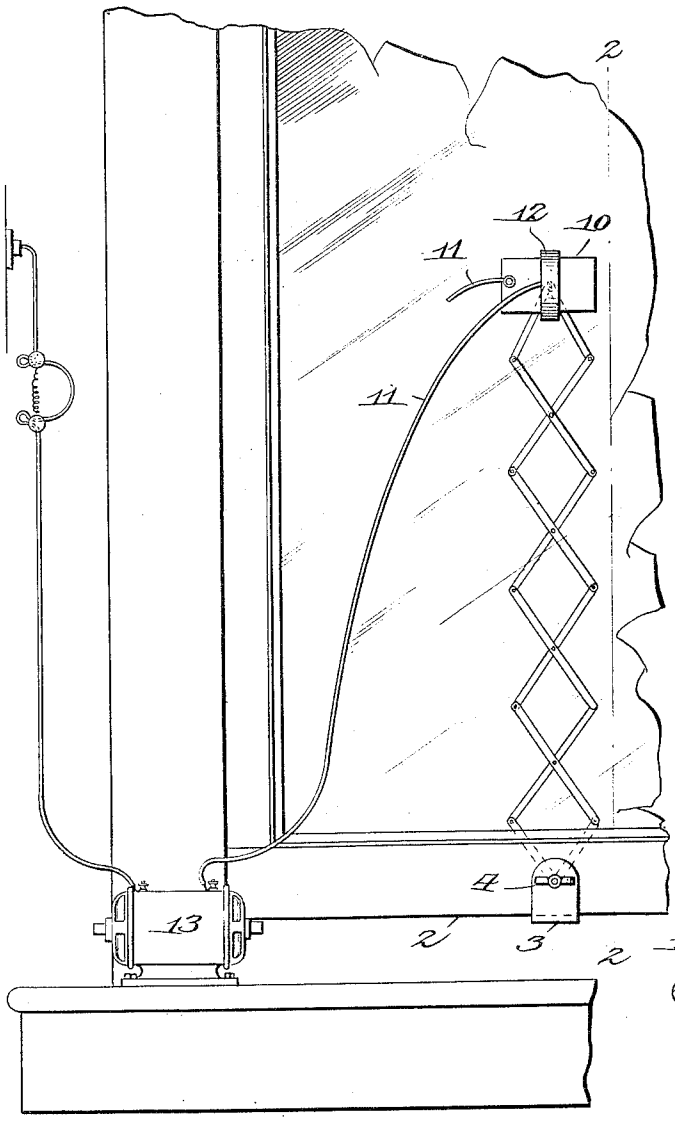


Fig. 2.

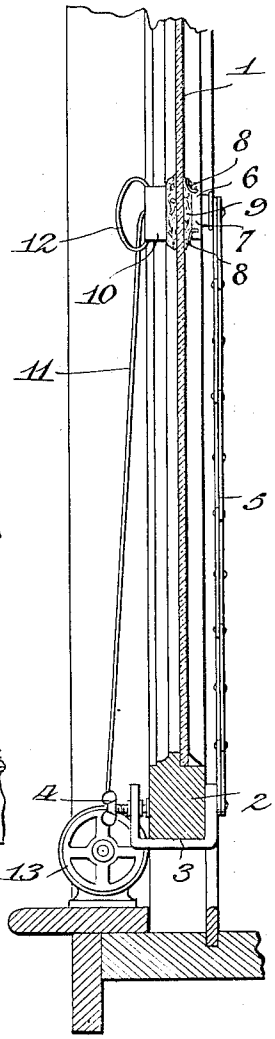
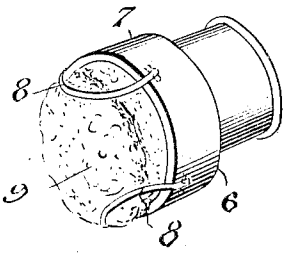


Fig. 3.



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WITNESS

UNITED STATES PATENT OFFICE.

JOHN A. HOWARD, SR., OF WEST NEW BRIGHTON, NEW YORK, ASSIGNOR TO CAMWARD ENGINEERING CO. INC., A CORPORATION OF NEW YORK.

WINDOW-CLEANER.

1,357,869. Specification of Letters Patent. Patented Nov. 2, 1920.

Application filed June 5, 1920. Serial No. 386,744.

To all whom it may concern:

Be it known that I, JOHN A. HOWARD, Sr., a citizen of the United States, residing at West New Brighton, S. I., in the county of Richmond and State of New York, have invented new and useful Improvements in Window-Cleaners, of which the following is a specification.

This invention relates to improvements in window cleaners and one of the principal objects is to provide a device of this nature in which by cleaning one side of the window a device will be automatically operated to clean the opposite side thereof.

Another object is to provide magnetically operated means for this purpose.

Other objects will appear from the following description and claims.

All of these objects are accomplished by means shown in the accompanying drawing comprising one sheet, in which:—

Figure 1 is a fragmentary elevational view of a portion of a window with my attachment in place.

Fig. 2 is a vertical sectional view of the same.

Fig. 3 is a detail view of one of the cleaning elements.

Like characters of reference refer to like parts throughout.

This invention contemplates the providing of a window cleaning element mounted on lazy-arms and adapted to be clamped to one side of a window or the like and operable by a second cleaning element comprising an electromagnet.

Referring more particularly to the drawings, 1 represents a window glass and 2 the supporting sash therefor.

A clamp or bracket 3 may be attached to the sash or other convenient portion of the window or the frame by means of a thumb nut or like device 4.

Pivotally mounted on the member 3 is a pair of lazy-arms 5 sufficiently extensible to reach all parts of the glass 1. Secured to the free end of the lazy-arms 5 is a cleaning element 6 which comprises a body portion 7 of steel or iron to which is secured by spring clips 8 or similar securing means, a sponge, cloth or other cleaning material 9.

A cleaning element 10 is provided with an electromagnet to which may be secured wires 11 from an ordinary socket. Member 10 is provided with a hand hold 12 and it carries on its underside a sponge or other cleaner similar to the member 6.

The operation of the device is as follows:—

Clamp 3 is secured to the sash of a window with the element 9 pressed against the outside of the glass. The operator then turns the electric current through the magnet in the element 10 and grasping handle 12, proceeds to clean the inner surface of the glass with said element 10. The magnet will draw the member 7 along and will press it into intimate relation with the outer surface of the glass so that both inside and outside of the window are cleaned simultaneously.

A transformer or "booster" for the current may be inserted in the circuit as at 13.

While I have described what I consider to be the most desirable embodiment of my invention, it is obvious that many of the details may be varied without in any way departing from the spirit of my invention; and I therefore do not limit myself to the exact details of construction herein set forth nor to anything less than the whole of my invention limited only by the appended claims.

What I claim as new and desire to secure by Letters-Patent is:—

1. In a device of the class described, the combination of window-cleaning elements, one of which comprises an electromagnet and the other of which comprises material adapted to be attracted by said magnet, and means for movably supporting the second element for operation against one side of a pane by the first said element on the other side of said pane.

2. In a device of the class described, the combination of a window-cleaning element comprising a magnet, a second window-cleaning element comprising material adapted to be attracted by said magnet, said elements adapted to clean opposite sides of a window glass, extensible means secured to and supporting said second window-cleaning

element, and means for removably securing said extensible means to a window.

3. In a device of the class described, the combination of a window-cleaning element comprising a magnet, a second window-cleaning element comprising material adapted to be attracted by said magnet, and a handle secured to one of said elements for moving it over one side of a window glass to simultaneously clean both sides of said window glass.

In testimony whereof I have affixed my signature.

JOHN A. HOWARD, SR.